

Work Order ID **56505**

Thursday, February 25, 2010 11:39:06 AM

Page 1

Item ID: D407-667-205

Accept

Setup Start

Revision ID:

Stop

Item Name: Crosstube Aft

Start Date: 2/26/2010 Start Qty: 1.00

Required Date: 3/12/2010 Req'd Qty: 1.00

Cust Item ID:

Customer:

Reference:

Approvals: Process Plan: MF Date: 10-2-25

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D407-667-245

Rev F

100

0.00



DC

Document Control

DOCUMENT CONTROL

Memo

0.00

Photocopy bluefile and create labels as per PPP D407-667-205-CHG006

Sublog

HJ for BG 10/04/01

110

0.00



Packaging

Packaging

Packaging

Memo

0.00

DP 10-3-18

120

0.00



CNC Bend 1

CNC Delta 100 Bender

BENDING MACHINE - CROSSTUBES

Memo

0.00

1-Bend tube as per Dwg D407-667-245 using CNC bender program 407 Aft and Folio FT

DP 10-3-18

Work Order ID 56505

Thursday, February 25, 2010 11:39:06 AM

Page 2

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Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start
Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

QC15- Crosstube Dimensional Check

0.00



QC

Memo

0.00

Quality Control

APR 10 11:38 AM / 5/10/09/18

B56505 D407-667-205

Work Order ID 56505

Thursday, February 25, 2010 11:39:06 AM



Page 3

Item ID: D407-667-205

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Run Start



Approvals: Process Plan: Date: Tooling: Date:

Stop



QC: Date: SPC (Y/N): Date:

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

140

0.00



Crosstubes

Crosstubes

Memo

0.00

1-Drill pilot holes in tube using drill Jig DT8583 & DT8584 as per Dwg D407-667-245. Drill all (3) top holes.

2-Drill and Ream all holes in tube to finish size using drill Jig DT8583 & DT8584 as per Dwg D407-667-245. Check dimensions between holes on all four sides.

3-Flip tube and switch drilling Jigs from right to left, left to right. Locate Jigs off existing holes using "T" pins.

4-Drill pilot holes using drill Jig DT8583 & DT8584 as per Dwg D407-667-245. Drill only the top (2) holes.

5-Drill & ream the top (2) holes to finish size using drill Jig DT8583 & DT8584 as per Dwg D407-667-245

6-Drill Aft rivet holes using drill Jig DT8789 as per Dwg D407-667-245. Note: Aft side has 3x top holes.

7-Drill Fwd rivet holes using drill Jig DT8789 as per Dwg D407-667-245. Drill only the top (3) holes.

8-C'sink holes as per Dwg D407-667-245. Allow rivet to sit below surface to compensate for paint.

9- Scribe tube to identify on the inner chamfer in the cuff D# and B#

10-Deburr & Inspect for surface damage. Repair damage within limits as per

MB
10-03-25

- Ann

10-3-25

Work Order ID 56505

Page 4

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Cust Item ID:

Required Date: 3/12/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: Date: Tooling: Date:

Run Start



QC: Date: SPC (Y/N): Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

Dwg D407-667-245

150



HandFXtube

Crosstubes Chemical Conversion

0.00

Memo

0.00

Hand Finishing Crosstubes

1 - - AWM 10.3.24

160



QC

QC3- Inspect Part Finish

0.00

Memo

0.00

Quality Control

S 10/09/24

170



QC

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

Quality Control

S 10/03/04

Q

Work Order ID 56505

Thursday, February 25, 2010 11:39:06 AM

Page 5

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Required Date: 3/12/2010 Req'd Qty: 1.00

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

180

Outsource process - NDT per QSI038 4.1

0.00

Outsource2

Memo

0.00

Outsource process - NDT

Liquid Penetrant Inspection as per QSI 0380
Issue P/O: 11580 LPI as per ASTM 1417
Level 2 Attach copy of NDT results to work order

CZ 10/3/24 (1)

190

Packaging

0.00

Packaging

Memo

0.00

Packaging

Ensure copy of NDT results attached to work order.

CZ 10/3/24 (1)

200

QC5- Inspect part completeness to step on W/O

0.00

QC

Memo

0.00

Quality Control

MZ 10 03 29 (1)

Work Order ID 56505

Thursday, February 25, 2010 11:39:06 AM

Page 6

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

210



SprayPaint

SprayPaint

0.00

0.00

Memo

1-Prime inside and outside crosstube as per QSI 005 4.2
2-Paint outside crosstube with White Imron as per QSI 005 4.2

PRIME:

Start Time: 9:00

Fininsh Time: 10:00

PAINT:

Start Time: 2:00

Finish Time: 3:00

ml 10 03 29 ①

220



QC

Quality Control

QC14- Inspect Spray Paint

0.00

0.00

Memo

Then, Wrap in plastic bag to protect from scratches

1 7:00:30

Work Order ID 56505

Thursday, February 25, 2010 11:39:06 AM



Page 7

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Required Date: 3/12/2010 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: Date: Tooling: Date:

Stop



QC: Date: SPC (Y/N): Date:

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
230		0.00							
	Crosstubes					ml	10	03	30 ①
Crosstubes	Memo	0.00							
Crosstubes	1-Install abrasion strips as per QSI 035 using DT8674. Install chafing shield as per Dwg D407-667-245. Note: (3) top holes should be facing up. → ml 10.03.31								
	2- Lightly scuff the bonded area using a 320 grit sand paper and clean the area with 41058 wash 'n' wipe								
	3-Install support with magnobond and install clamps as per Dwg D407-667-245 using installation jig DT9025. Torque clamps to 80-100 in lb A/R Magnobond Batch: 112417 → ml 10.03.31 EXP: 01/2011								
	4-Install nut plates as per Dwg D407-667-245. Touch-up rivet heads with Imron paint. → ml 10.03.31								
240	QC5- Inspect part completeness to step on W/O	0.00							
QC	Memo	0.00							
Quality Control									

8/10/04/01

②

Work Order ID 56505

Thursday, February 25, 2010 11:39:06 AM

Page 8

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Required Date: 3/12/2010 Req'd Qty: 1.00

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

250

Pick Kit

0.00



Packaging

Memo

0.00

Packaging

10-4-1 SP

260

QC4- 100% Inspect kits for completeness

0.00



QC

Memo

0.00

Quality Control

8 10/6/06

270

Packaging

0.00



Packaging

Memo

0.00

Packaging

Identify and in kanban rack
Location: _____

NVR

Perry

Work Order ID 56505

Page 9

Thursday, February 25, 2010 11:39:06 AM

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Accept



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Stop



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Start Date: 2/26/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 3/12/2010 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

280

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/04/07 *[Signature]*
MF 10-4-7

Picklist Print

Thursday, February 25, 2010 11:39:05 AM

Page 1

Work Order ID: 56505

Parent Item: D407-667-205

Parent Item Name: Crosstube Aft

Comments: IPP Rev: C 05.09.02 Add holes for compatibility with Bell Skidtubes KJ/JLM
IPP Rev: D Added Magnabond, Rubber Cushion & Clamps 07-02-19
JLM

Start Date: 2/26/2010

Required Date: 3/12/2010

Start Qty: 1.00

Required Qty: 1.00

NA5149005634 05101751

AN960JD516

Purchased No

100

Each

0.0000

18.0000

Washer

D2856-400

Manufactured No

230

f

256.5521

1.3558

Abraison Strip

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST403

256.5520842

50593

141.312084

52563

115.24

D2873-043

Manufactured No

230

Each

37.0000

2.0000

Nut Plate Assembly

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

37

45370

2

45422

1

50871

14

53966

20

M11370C 10-4-15

M 10.03.31

M 10.03.31

Picklist Print

Thursday, February 25, 2010 11:39:05 AM

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Parent Item: D407-667-205



Parent Item Name: Crosstube Aft

Start Date: 2/26/2010

Required Date: 3/12/2010

Comments: IPP Rev:C 05.09.02 Add holes for compatibility with Bell Skidtubes KJ/JLM
IPP Rev:D Added Magnobond, Rubber Cushion & Clamps 07-02-19
JLM

Start Qty: 1.00

Required Qty: 1.00

D2873-045

Manufactured No

230

Each

55.0000

2.0000



Nut Plate Assembly

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

55

45210

3

50001

12

53967

20

53968

20

ml 10.03.31

D2894-1

Manufactured No

230

Each

27.0000

1.0000



2.750 Support

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

27

43713

8

43881

18

45483

1

ml 10.03.30

Picklist Print

Thursday, February 25, 2010 11:39:05 AM

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Parent Item: D407-667-205



Parent Item Name: Crosstube Aft

Start Date: 2/26/2010

Required Date: 3/12/2010

Comments: IPP Rev:C 05.09.02 Add holes for compatibility with Bell Skidtubes KJ/JLM
IPP Rev:D Added Magnobond, Rubber Cushion & Clamps 07-02-19
JLM

Start Qty: 1.00

Required Qty: 1.00

D3190-1 Manufactured No

230

Each

26.0000

2.0000



Chafing Shield

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

26

40109

6

47456

20

ml 10-03-31

D407-667-205TRN Manufactured No

230

Each

2.0000

1.0000



Crosstube Turning Detail

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

LG

2

55833

1

55834

1

DP 10-3-18

MS20601-AD4W8 Purchased No

230

Each

330.0000

14.0000



RIVET

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

330

108521

200

112203

130

ml 10-03-31

Picklist Print

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Parent Item Name: Crosstube Aft

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Required Date: 3/12/2010

Comments: IPP Rev:C 05.09.02 Add holes for compatibility with Bell Skidtubes KJ/JLM
IPP Rev:D Added Magnobond, Rubber Cushion & Clamps 07-02-19
JLM

Start Qty: 1.00

Required Qty: 1.00

MS21920-22

Purchased No

230 Each

54.0000 4.0000



Clamp(per MIL-DTL-8783C)

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

54

109495

6

110260

2

111210

46

ml 10.03.31

AN5-10A

Purchased No

260 Each

82.0000 10.0000



Bolt

10-4-1 SP

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

82

107013

8

110363

2

112314

1

113149

1

113524

70

10

Picklist Print

Thursday, February 25, 2010 11:39:05 AM

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Parent Item Name: Crosstube Aft

Start Date: 2/26/2010

Required Date: 3/12/2010

Comments: IPP Rev:C 05.09.02 Add holes for compatibility with Bell Skidtubes KJ/JLM
IPP Rev:D Added Magnobond, Rubber Cushion & Clamps 07-02-19
JLM

Start Qty: 1.00

Required Qty: 1.00

AN5-32A
Bolt

Purchased No 260 Each 152.0000 4.0000



1112938 10-4-13

Warehouse Loc Qty Loc Code
Location

Main Warehouse

ST	152	
106242	3	
106519	4	
110363	17	
112933	28	
113121	100	

AN5-34A
Bolt

Purchased No 260 Each 138.0000 4.0000



10-4-1 5

Warehouse Loc Qty Loc Code
Location

Main Warehouse

ST	138	
104679	2	
107013	2	
113149	84	
113226	50	

Picklist Print

Page 6

Thursday, February 25, 2010 11:39:05 AM

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Parent Item Name: Crosstube Aft

Start Date: 2/26/2010

Required Date: 3/12/2010

Comments: IPP Rev:C 05.09.02 Add holes for compatibility with Bell Skidtubes KJ/JLM
IPP Rev:D Added Magnobond, Rubber Cushion & Clamps 07-02-19
JLM

Start Qty: 1.00

Required Qty: 1.00

MS21042L5

Purchased

No

260

Each

415.0000

4.0000



10-4-1 SP

Nut

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

414

110382

10

111636

1

112314

16

113523

187

113537

200

Main Warehouse

ST139

1

112314

1

Picklist Print

Thursday, February 25, 2010 11:39:05 AM

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Parent Item Name: Crosstube Aft

Start Date: 2/26/2010

Required Date: 3/12/2010

Comments: IPP Rev: C1105.09.02 Add holes for compatibility with Bell Skidtubes KJ/JLM
IPP Rev: D Added Magnobond, Rubber Cushion & Clamps 07-02-19
JLM

Start Qty: 1.00

Required Qty: 1.00

MS21920-25 Purchased No 260 Each 176.0000 2.0000



Clamp(per MIL-DTL-8783C)

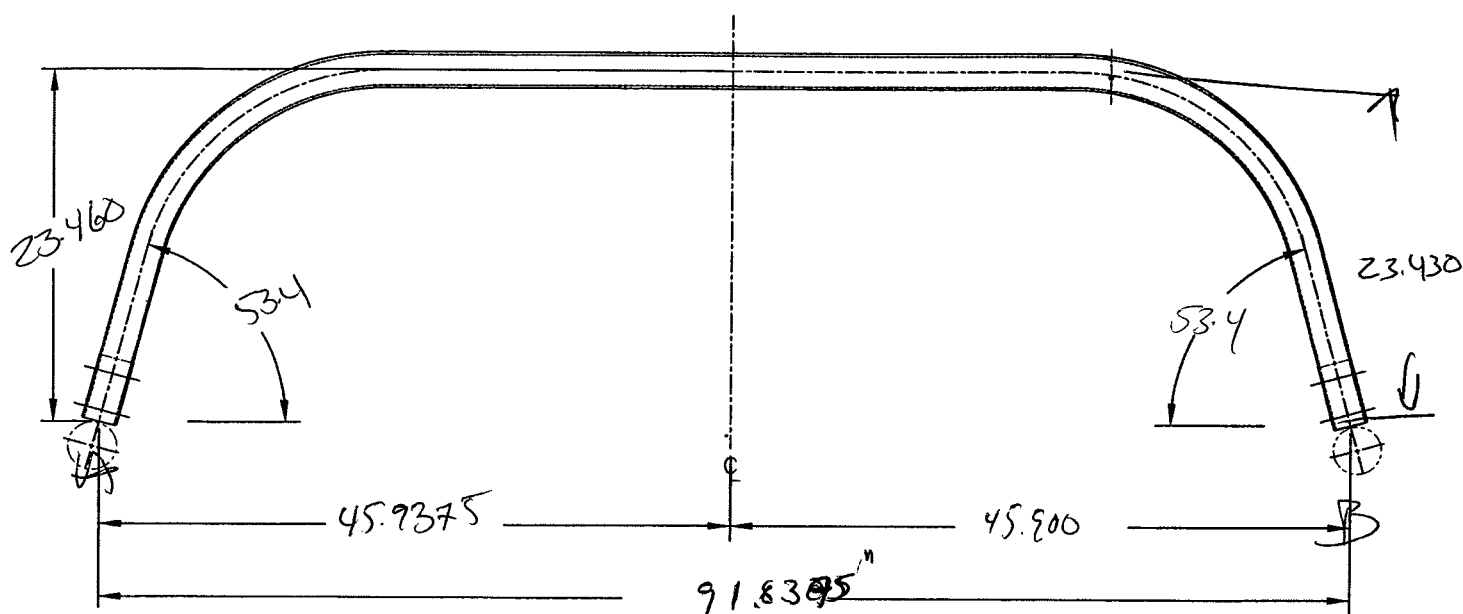
<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
CA	25	
113744	25	
Main Warehouse		
ST	151	
107456	2	
108111	3	
108975	17	
109181	42	
109644	10	
111429	1	
112495	1	
113281	25	
<u>113282</u>	50	

m/ 10.03.30

Robber Cushion:
D3595-063-450 B# 52447 ^{x2} m/ 10.03.30

DART AEROSPACE LTD		Work Order:	56505
Description: Crosstube High Aft (407)		Part Number:	D407-667-205
Inspection Dwg: D407-667-245 Rev: F		Page 1 of 1	

Required Dimension	Min	Max
Height	23.46	23.58
1/2 Span	45.86	45.98
Angle	54	56
Total Span	91.72	91.96



Comments
ANGLES LOW - ONE HEIGHT LOW - Acceptable P. 03.18

QC15 Inspection	S
Date	10/03/15

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	
B	09.06.22	Dwg Rev updated	KJ	

Item	QTY -245	PART NUMBER	DESCRIPTION
1	X	D407-667-245	CROSSTUBE ASSEMBLY (407 HIGH AFT)
2	1	D6011-115	CROSSTUBE
3	2	D2856-400-773	ABRASION STRIP
4	2	D2873-043	NUT PLATE
5	2	D2873-045	NUT PLATE
6	1	D2894-1	SUPPORT
7	2	D3190-1	CHAFING SHIELD
8	2	D3595-063-430	RUBBER CUSHION
9	14	MS20601AD4W8	RIVET (OR NAS9302B-4-8)
10	4	MS21920-22	CLAMP
11	2	MS21920-25	CLAMP (OR MS21920-24)
12	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947- 100, TYPE II, CLASS 2 ADHESIVE)

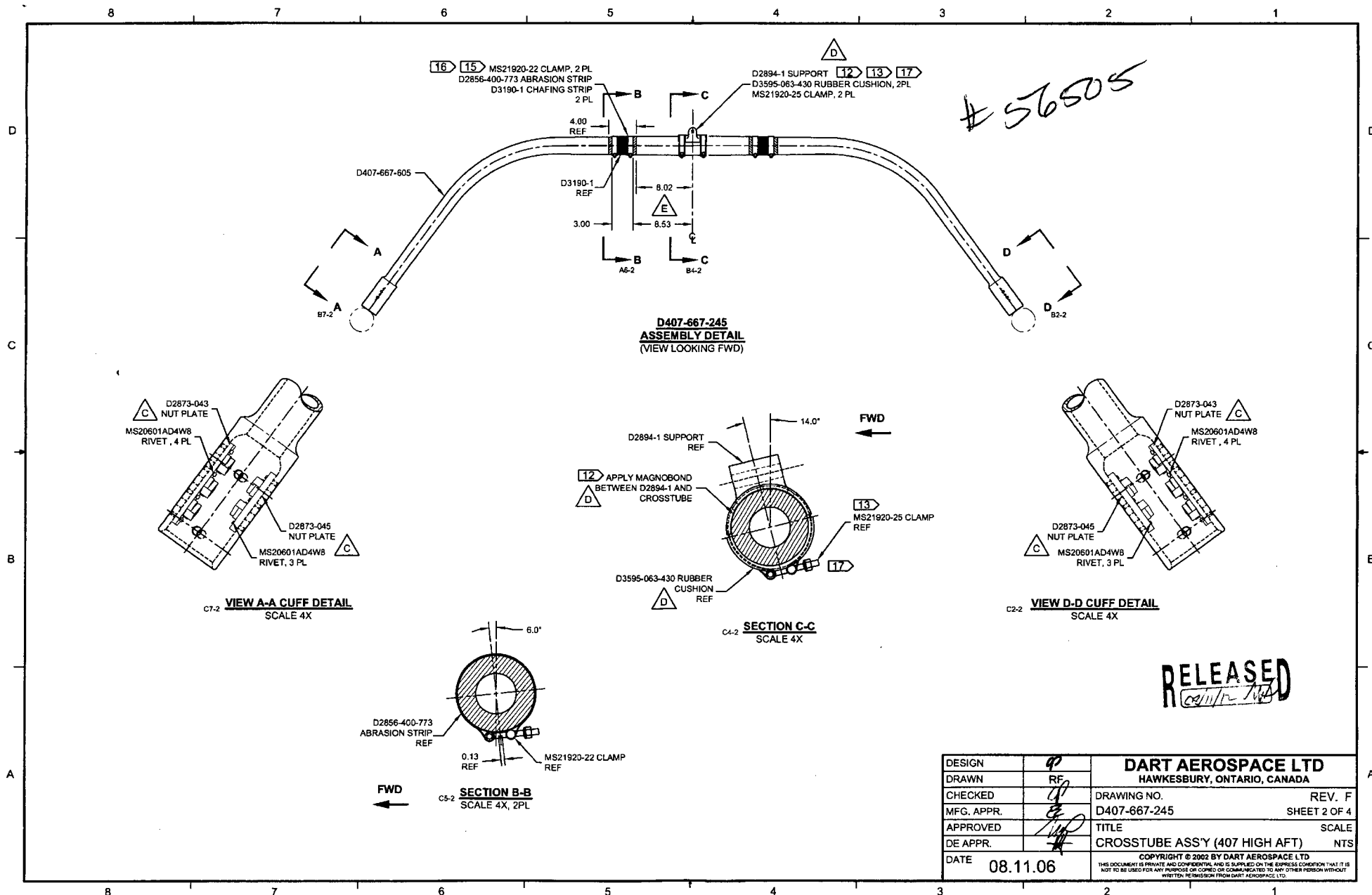
#56205

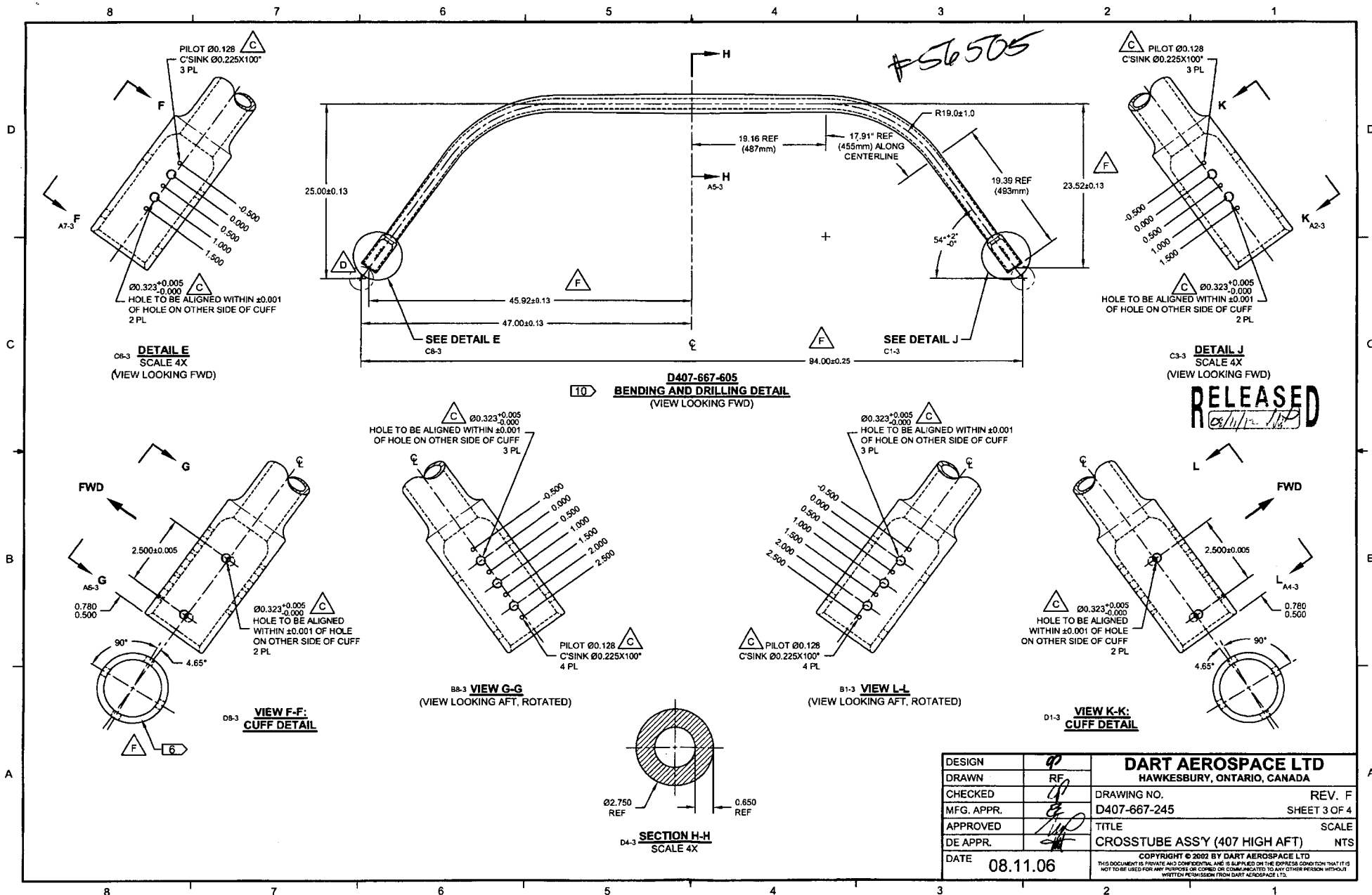
GENERAL NOTES:

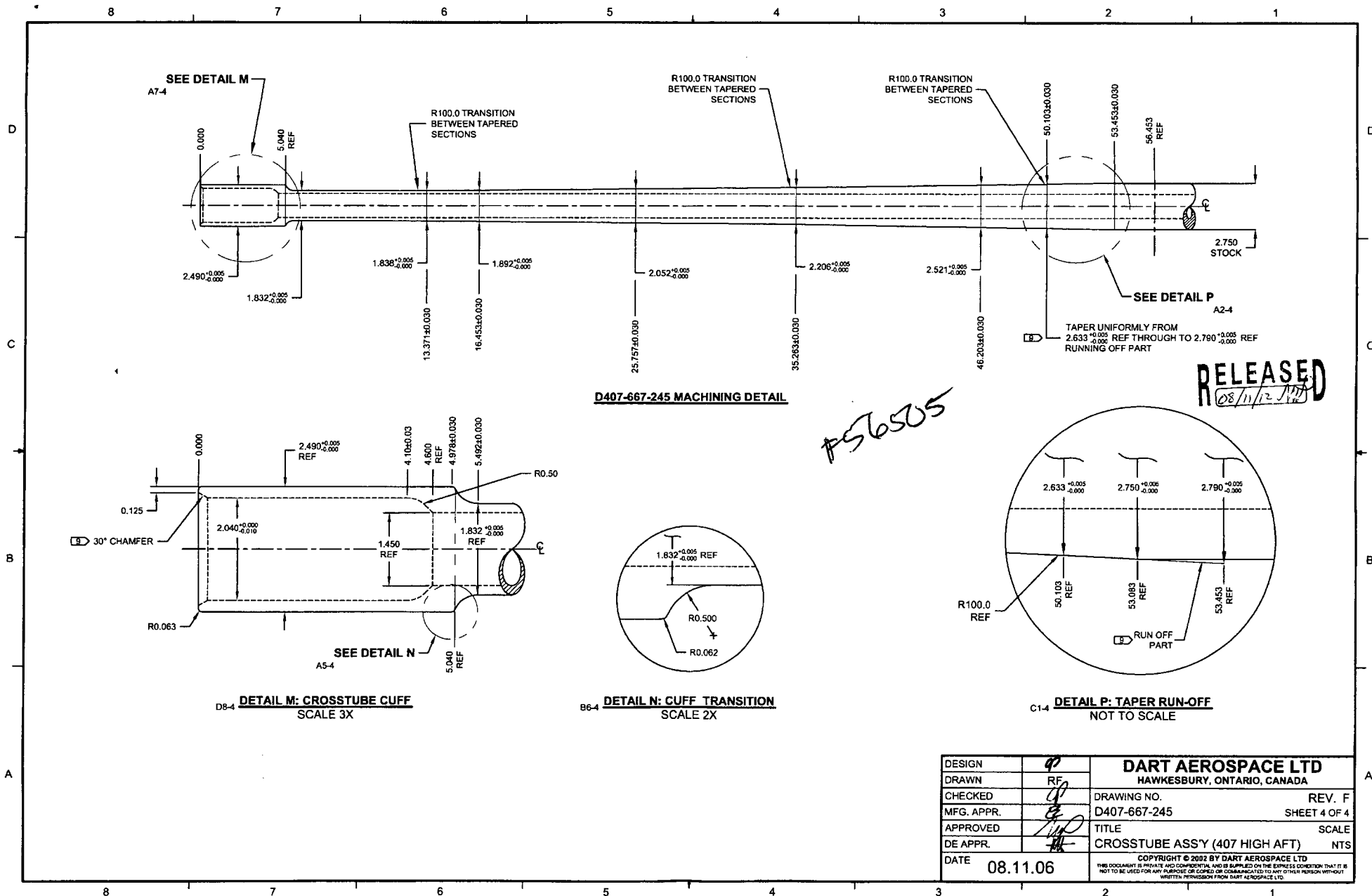
- MATERIAL: MANUFACTURED FROM D6011-115
FINISHED LENGTH = 112.91±0.020
- FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- UNITS: INCHES UNLESS OTHERWISE NOTED.
- BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- IDENTIFICATION: SCRIBE DART PART NUMBER "D407-667-245" AND BATCH NUMBER ON INSIDE OF CUFF USING VIBRATING STYLUS.
- WEIGHT: 27.7 lbs
- PART IS SYMMETRIC ABOUT CENTERLINE.
- RUN-OFF PART. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- BEND PROGRESSIVELY WITH A MINIMUM OF 6 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- INSTALL D2894-1 CENTER SUPPORT USING A 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- INSTALL MS21920-25 CLAMPS WITH D3595-063-430 RUBBER CUSHIONS TO SECURE D2894-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE OPPOSITE CROSSTUBE SUPPORT.
NOTE: MS21920-24 CLAMPS CAN BE USED TO ACCOMMODATE VARYING DIAMETERS. ENSURE THERE IS A MINIMUM OF 1.5 THREADS IN SAFETY ON THE NUTS.
- EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- INSTALL D2856-400-773 ABRASION STRIP WITH A 0.13 (REF) GAP ON BOTTOM SIDE OF CROSSTUBE, PER QSI 035.
- INSTALL D3190-1 CHAFING SHIELDS SO THAT OVERLAP IS ON BOTTOM SIDE OF CROSSTUBE OPPOSITE D2894-1 SUPPORT.
- TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS ARE SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

RELEASED
08/11/12

F	REFORMAT NOTES TO NEW STANDARDS (ZN B8-1); RELOCATED FLAG # 6 (ZN A8-3) PER NCR 210; REMOVED REF. & ADD TOLERANCES (ZN C6-3, C4-3 & D2-3)	RF	08.11.06
E	8.02 AND 8.53 WERE 8.40 AND 8.90 (ZN D5-2); REORGANIZED VIEWS AND REFORMATED DRAWING TO CURRENT STANDARDS. REASONS: CLAMPS MOVED 0.375 TOWARD CL TO ELIMINATE INTERFERENCE WITH AIRCRAFT MOUNTS. REFERENCE: PAR#08-21 AND ECN#1225	MB	08.07.24
D	ADD VIEW FOR OEM SKID HOLES, ROTATE ORIENTATION OF CLAMPS SECTION F-F, REMOVE -851 ABRASION STRIP, ADD MAGNOBOND 6398, ADD CUSHION	PH	07.02.07
C	ADD HOLES AND NUT PLATES FOR COMPATIBILITY WITH BHT/AA SKIDTUBES	PH	05.07.26
B	ADD CHAFING SHIELD	CP	03.05.21
A	NEW ISSUE	CP	02.05.13
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF	DRAWING NO.	REV. F
CHECKED	RF	D407-667-245	SHEET 1 OF 4
MFG. APPR.	RF	TITLE	SCALE
APPROVED	RF	CROSSTUBE ASS'Y (407 HIGH AFT)	NTS
DE APPR.	RF	COPYRIGHT © 2002 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	
DATE	08.11.06		







5.0 PARTS LIST

Item	Qty -011	Qty -013	Qty -015	Qty -101	Qty -201	Qty -103	Qty -203	Qty -105	Qty -205	Part Number	Description
	X									D206-667-011	SPACER BLOCK KIT
		X								D206-667-013	NUT PLATE KIT (-101/-103/-105/-203/-205)
			X							D206-667-015	NUT PLATE KIT (-201)
				X						D206-667-101	CROSSTUBE INSTALLATION, 206A/B HIGH FWD
					X					D206-667-201	CROSSTUBE INSTALLATION, 206A/B HIGH AFT
						X				D206-667-103	CROSSTUBE INSTALLATION, 206L/L-1/L-3/L-4 HIGH FWD
							X			D206-667-203	CROSSTUBE INSTALLATION, 206L/L-1/L-3/L-4 HIGH AFT
								X		D407-667-105	CROSSTUBE INSTALLATION, 407 HIGH FWD
									X	D407-667-205	CROSSTUBE INSTALLATION, 407 HIGH AFT
1				1						D206-667-141	CROSSTUBE ASSEMBLY, 206A/B HIGH FWD
2					1					D206-667-241	CROSSTUBE ASSEMBLY, 206A/B HIGH AFT
3						1				D206-667-143	CROSSTUBE ASSEMBLY, 206L/L-1/L-3/L-4 HIGH FWD
4							1			D206-667-243	CROSSTUBE ASSEMBLY, 206L/L-1/L-3/L-4 HIGH AFT
5								1		D407-667-145	CROSSTUBE ASSEMBLY, 407 HIGH FWD
6									1	D407-667-245	CROSSTUBE ASSEMBLY, 407 HIGH AFT
10				*2	*2	*2		*2		D2891-1	SUPPORT
11							*2			D2892-1	SUPPORT
12									*1	D2894-1	SUPPORT
13				*2	*2	*2		*2		D2856-400-694	ABRASION STRIP
14							*2		*2	D2856-400-773	ABRASION STRIP
15									*1	D2856-600-851	ABRASION STRIP
16				*4	*4	*4		*4		MS21920-20	CLAMP
17							*4		*4	MS21920-22	CLAMP
18									*2	MS21920-24	CLAMP
19				4	4	4		4		AN5-32A	BOLT
20							4		4	AN5-34A	BOLT
21				4	4	4	4	4	4	MS21042L5	NUT (OR MS21042-5)
22				8	8	8	8	8	8	AN960JD516	WASHER
23									*2	D3190-1	CHAFING SHIELD
30	8									AN4-6A	BOLT
31	8									AN4-7A	BOLT
32	16									AN960JD416	WASHER
33	2									D3193-041	SPACER BLOCK ASSEMBLY
40		2		*2		*2	*2	*2	*2	D2873-043	NUT PLATE
41		2		*2		*2	*2	*2	*2	D2873-045	NUT PLATE
42			2		2					D2872-043	NUT PLATE
43			2		2					D2872-045	NUT PLATE
44		10		10		10				AN5-7A	BOLT
45		10	10		10		10	10	10	AN5-10A	BOLT
46		4	4	4	10	4		4		AN5-30A	BOLT
47		4					4		4	AN5-32A	BOLT
48		18	18	10	12	10	10	10	10	AN960JD516	WASHER
49		4	4		6					MS21042L5	NUT (OR MS21042-5)

*REFERENCE ONLY. PARTS ARE INCLUDED IN D206-667-141/241/143/243, & D407-667-145/245 ASSEMBLIES ABOVE

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Revision: C

Date: 05.07.26

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



LIQUID PENETRANT TEST REPORT

P. 1532

CLIENT DART Aero Space DATE March 26-2010 PAGE 1 OF 1
ATTENTION LINDA/CHARTEL ACUREN JOB NO. 188-10-0715 TIME AM ☒ P
ADDRESS 1270 ABEL OPEN ST. PO/WO NO. [T1550]
HAWKES BURY CN, KGH 1K7 WORK LOCATION SHOP
PROJECT F. P. I. ON CROSS TUBES ACCEPTANCE STD. ASTM 1917 REV./DATE 200
ITEM(S) EXAMINED 6 PCS

JOB DESCRIPTION PROCEDURE No. LT-0002 REV./DATE --- TECHNIQUE No. LT-0002 REV./DATE ---
PART NO. --- MATERIAL ALUMINUM THICKNESS ---
SCOPE WET FLUORESCENT LIQUID PENETRANT INSPECTION
CARRIED OUT 100% EXTERNAL

TEST DETAILS

METHOD ☒ FLUORESCENT ☐ VISIBLE ☒ WATER WASH ☐ SOLVENT REMOVABLE ☐ POST EMUL
FAMILY BRAND MAGNAFLUX BLACK LIGHT S/N 16459 ☐ OUTPUT > 1000 μ W/cm² ☐ AMBIENT <
PENETRANT 2LG7 MINIMUM DWELL TIME 45 MIN. LIGHTING EQUIP. ☐ FLASHLIGHT ☐ TROUBLELIGHT ☐ OUTPUT > 100 fc @ 5
PENETRANT REMOVER H2O MINIMUM DRY TIME >10 MIN. OTHER LABINO
DEVELOPER SKD 52 MINIMUM DWELL TIME 10 MIN. LIGHT METER S/N 1098866 CAL DUE DATE ---
DEVELOPER TYPE ☒ NON AQUEOUS ☐ AQUEOUS ☐ DRY

TEST SURFACE

SURFACE CONDITION ☐ AS GROUND ☐ AS WELDED ☒ MACHINED ☐ SHOT BLASTED ☐ CLEAN BARE METAL
SURFACE TEMPERATURE ☐ < -4°C/20°F ☐ -4°C/20°F TO 10°C/50°F ☒ 10°C/50°F TO 52°C/125°F ☐ > 52°C/125°F

RESULTS- (☐ METRIC ☐ IMPERIAL)

1	CROSSTUBE, W.O. 56473	✓
1	CROSSTUBE, W.O. 56475	✓
1	CROSSTUBE, W.O. 56504	✓
1	CROSSTUBE, W.O. 56505	✓
1	CROSSTUBE, W.O. 56799	✓
1	CROSSTUBE, W.O. 56800	✓

[Signature] 10 06 2010

Scope of Services

The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.

Standard of Care

In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

SIGNATURES

CLIENT REPRESENTATIVE <u>Matthew Mousch</u>	DTR # <u>E-27370</u>
TECHNICIAN (SIGNATURE): <u>[Signature]</u>	REPORT REVIEWED BY: <u>---</u>
NAME (PRINT): <u>Mike Johnston</u>	NAME <u>---</u> INITIALS <u>---</u>
CGSB LEVEL <u>2</u> SNT LEVEL <u>---</u>	CGSB LEVEL <u>---</u> SNT LEVEL <u>---</u>
CGSB REG. NO. <u>6606</u>	CGSB REG. NO. <u>---</u>

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